

Year/Paper	Question Number	Marks	Topic
Jun09 Paper 1	1A,b	2,8	Input and Output Devices
	1c	6	Expert Systems
	2a	4	Buses
	2b	4	Serial/Parallel/half duplex/full Duplex
	2c	3	Packet/Circuit Switching
	2d	8	Impact of unrestricted access to internet on young
	3	9	MICR, OMR, OCR – meanings and uses
	4a,b	6,2	Systems Analysis Feasibility factors; Spiral model
	5a,b,c,d	2,3,5,2	Actuators, sensors, thickness control
	6a,b	6,3	Binary, bcd, hex; binary to interpret hexadecimal
	7a,b,c	6, 6, 4	User interface design factors; backup/archive; backup
	8a,b	3,8	Chars of lans and wans; checksums and parity checks
Jun09 Paper 2	1a, b	6,2	Sequence, Selection and Iteration; Choice and output
	1c	17	Dry running, purpose of algorithm and types of errors
	1d	6	Dry running and debugging
	1e	6	Describe debugging tools that can be used to catch errors
	2a	6	Website; Parcel delivery data items/elements and reasons
	2b	6	Postcodes and sorting into order
	2c	8	Validation and 3 validation checks for a postcode
	2d	6	Formatting, string manipulation (postcodes)
	3a,b	2,3	Arrays, interpreting the contents of a 2d array
	3c	3, 2	Pseudocode for array and its completion; parameters
	3d	6	Code in high level lang. of choice for Lift Supervisor call
	4a	5	Variables, constants, maintainability using constants
	4b	8	Variables/data types/reason for chosen data type
	4c	8	Write pseudocode algorithm to pick best seats
June10 Paper1	1a	6	Input, output, storage devices for a store checkout
	1b	2	Functions of system software and application packages
	1c	4	What's a LAN; One HW to connect LAN to internet +reason
	1d	6	Checksums/parity/binary addition for error detection
	2	8	Four purposes of operating systems
	3a	2	Two differences between RAM and ROM
	3b	4	Why is control software in ROM; why some RAM?
	4a	8	Sys. analysis why requirements/ methods of fact finding
	4b	6	Items in Requirements spec; items in Design spec
	5a	6	Change decimal into binary, octal; relationship between
	5b	6	Twos complement; negative number and subtraction
	6a	5	Protocols; setting up a communications link
	6b	6	Logical parts of a protocol; Physical parts of a protocol
	6c	6	Steps used to protect data held on a computer system
	7	8	Menu ; Natural language interface: App, HW, Suitability
	8	5	OMR; How it works and why it is suitable
	9a	6	Two types of secondary storage devices and how used
	9b	6	Advantages and Disadvantages of working from home for: programmer, software house and society

Jun10 paper 2	1a	4	Benefits of using a drop-down box on a user interface
	1b	4	Pseudo code for updating football match result - win/lose
	1c	2, 12	Black box testing – Test plan completion football match
	1d	6	Report design – League table
	2a	7	Modules (what and advantages) and stepwise refinement
	2b	7	Complete hierarchy (top-down) diagram of given scenario
	2cde	3,1,2	What is a function?, data type?, dry running
	2f	5	Rewrite a for loop with a while loop
	3a	3,3	What is an array? 3 items to specify in defining an array
	3b	4	Complete an algorithm to fill an array
	3c	8	Write pseudo code to print out tickets
	3d	8	Discuss rules for declaring variable, constants, arrays for error-free and easy understanding
	4a	4	Purpose of given function: ASCII(letter); why subtract 64?
	4b	3	Explain a recursive function
	4c	3	Dry run; give result with reason.
	4d	5	Trace running of a function: show every call and result
	4e	2	Function written using iteration instead of recursion
	4f	4	One adv/disadv of using iteration instead of recursion
Jun10 paper 3	1a	2,1,3,3	OS: 2 reasons why is memory management necessary? Virtual memory? How is virtual memory used? What is disk thrashing?
	1b	2	What is scheduling? describe one method of scheduling
	2a	2	Explain main purpose of a translator
	2b	2,1,1	Intermediate code (IC) – adv over executable code; what other software needed with IC? disadv of IC
	2c	2	What is code optimisation (when compiler is used)?
	3a	2	Two features of Von-Neuman architecture (not fetch decode Execute)
	3b	3	Names of 3 registers (not PC)
	3c	4,2	Describe fetch-decode-execute cycle. How is jump done
	3d	3	What is a co-processor?
	4a	3	Convert a floating point binary number to denary
	4b	2	Largest positive number possible (6 bit mantissa, 2 expo)
	4c	1,2,3	Normalisation of binary numbers
	5a	1,1	Static/dynamic data structures
	5b	2, 6	Merge strings; write algorithm to merge streams of data
	6a	5	Types of programming language- match to scenarios
	6b	8	Declarative language; fact, rule, goal, instantiation, backtracking
	7a	2	Use of functions and procedures
	7b	8	Discuss Local, global variables and parameters
	7c	2	Data structure used in program execution – which & why
	8 a,b,c	1, 2, 3	BNF
	9a, b, c	2,2,3	Assembly lang: mnemonics; Relative; Indexed addressing
	9d, e	2,2	Two other addressing modes; Flow control
	10a, b	1,2	Primary Key; Secondary key
	10c	11213	ERD; cardinality; why separate tables? twice, Redraw ERD
	10d	3	SQL – purpose of given sql
	11a	2	Why is the unified modelling language (UML) used?
	11b	3	Identify shapes in UML
	11c,d	1,3	Feature of OOP in UML; eg of object, class, message

Jun11 paper 1	1a, b	2, 4	What is an input device/ output device; Automatic ip/op
	2a	4	Describe serial and parallel methods of data transmission
	2b	2	Computer application that may use parallel transmission
	3a	4	Peripherals needed at an information point + justification
	3b	3	Method of connectivity (network) with justification
	3c	6	Explain why a menu interface used; Forms interface used
	4a	2,2	Character set of computer + use of code for character set
	4b	2,2	Validation & verification: 1 verification; Existence Presence
	4c	8	Discuss need to backup and archive data + methods used
	5a	2	Concerns of personal data being held on computers
	5b	5	Steps used to allay customer concerns on personal data
	6a	6	Describe 3 stages of the systems life cycle
	6b	3	Describe the waterfall model
	6c	4	Importance of evaluation + the criteria used in evaluation
	6d	4	Describe 2 maintenance types carried out on finished sys
	7a	6	Describe contents of registers: MDR, CIR, Accumulator
	7b	4	Describe different kinds of bus in the processor
	8a	2	What is a protocol?
	8b	6	Describe three parts of a protocol that will enable comms
	8c	5	Describe packet switching to carry data on a network
	9a	8	OS types and uses: multi-tasking; multi-user
	9b	1, 3	Utility software and file handling utilities within computer
Jun11 paper2	1a	8	User Interface Design
	1b, 1c	2, 3	Write pseudo code using an IF statement
	1d	3	Variables and If statements
	1e	2	Nested IF statement. What is nesting?
	1f	8	Beta version; what is it and what are the advs and disadvs
	2a	4	(RAD) what is it? how does it help in developing an app?
	2b	4,1	Define a procedure & how its used; Name one in the code
	2c	2, 1	Difference between function & procedure; Name a function
	2d	3	Explain a parameter using example from code
	2e	2, 1	Keyword violation? Syntax error?
	2f	2, 1	Error, implication for customer and type of error
	2g	8	Write an algorithm in pseudo code to meet requirements
	3a	2, 3	Indexed sequential file – what is it and reason for use
	3b	2	Data types: why is a phone number not stored as an int?
	3c	6	Data types and field sizes
	3d	4	Estimate file size for 1000 records
	3e	2, 2	Resetting a file; Complete Pseudo code
	3f	5	Flowchart to be completed to meet given specification
	4a	4	What is iteration and how is it used in given code?
	4b	6	Complete a trace table
	4c	2,7	What is recursive algorithm; Write recursive code in lang
Jun11 Paper 3	1a	2	OS: what is the boot file? When is it used?
	1b	4	Explain virtual memory
	1c	6	Explain the purpose and use of file allocation table (FAT)
	2a	1, 4	used to convert sourcecode to object? What's sourcecode

[illegible]